

Impacts of Development and Energy Infrastructure in the Vicinity of the A.T.

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"The Appalachian Trail is a way, continuous from Katahdin in Maine to Springer Mountain in Georgia, for travel on foot through the wild, scenic, wooded, pastoral, and culturally significant lands of the Appalachian Mountains. It is a means of sojourning among these lands, such that the visitors may experience them by their own unaided efforts."¹

The Appalachian Trail Conservancy (ATC), a §501(c)(3) nonprofit organization, works closely with Appalachian Trail volunteer maintaining clubs ("Clubs"), the National Park Service Appalachian National Scenic Trail administrator, the United States Forest Service and other public and private partners to ensure the protection and stewardship of the natural, cultural, and experiential resources of the Appalachian National Scenic Trail (known as ANST, A.T., or "the Trail"). Approximately fifty federal, state, or other public agencies have authority or jurisdiction over lands and resources within the protected A.T. corridor. ATC has a central management role by virtue of its Cooperative Agreement with the United States Department of the Interior National Park Service and its close working partnership with the United States Department of Agriculture Forest Service, State conservation and wildlife agencies and other partners.

ATC's Trail management and conservation policies are meant to shed light upon, and provide guidance regarding the intent of the cooperative management partnership, to assist:

- (a) Private landowners and the general public;
- (b) Developers of private land;
- (b) The ATC and the A.T. Clubs; and,
- (c) Local governments, Federal and State land-managing and other partner agencies,

¹A.T. Management Principles - NPS, 1978 <u>https://www.nps.gov/appa/getinvolved/upload/AT-Management-Principles-1978.pdf</u>

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as decisions are made by these actors regarding land use and stewardship activities on or near the Trail. The agencies that exercise authority and jurisdiction over specific protected A.T. protected lands work within their defined procedures to propose, administer, and enforce public policy regarding the Trail. ATC policies are recommendations developed to encourage communication among all whose actions might affect the Trail experience, and to support appropriate, coordinated Trailwide management.

Overview

The Appalachian Trail Conservancy (ATC) and its cooperative management partners seek to preserve and protect the scenic, cultural, historical, and natural resources of the Appalachian Trail and features in the surrounding environment that contribute to the Appalachian Trail experience, as defined by the *National Trails System Act*², the *Comprehensive Plan for the Protection, Management, Development, and Use of the Appalachian National Scenic Trail*³, The *NPS Appalachian Trail Foundation Document*⁴ and ATC policy⁵. The Trail itself, its surrounding landscape and the "Trail experience" have been constantly changing throughout its more than 100-year history. The ATC and its cooperative management partners acknowledge this ever-evolving resource and recognize that the Appalachian Trail exists within a larger, dynamic system of natural habitats and human settlements. Thus, the intent of this policy is not to stop or stymie all change in the vicinity of the A.T., but to define the core aspects that make the A.T. a unique natural and cultural resource and integrate these core values with compatible adjacent land uses.

The Appalachian Trail Conservancy recognizes the societal needs, benefits, and costs of transitioning from carbon intensive fossil fuel-based energy production to producing energy from renewable resources. ATC also recognizes that the Appalachian Trail environment and the experience it provides are being impacted by human induced climate change, as described in <u>ATC's</u> <u>Climate Change Policy</u>. Therefore, the objective of the Impacts of Development and Energy Infrastructure policy is not to dissuade the growth of renewable energy infrastructure, but to ensure that any proposed energy infrastructure in the vicinity of the Appalachian Trail, including renewables, is thorough analyzed for its societal necessity and its impacts to the Appalachian Trail. This includes careful, appropriate siting with proper mitigation and no-net-loss of A.T. values.

The primary, overarching objective of this policy is to ensure that the impact of any proposed development on the ANST be evaluated and managed on a no-net-loss basis, i.e., the resources and Trail experience as defined by the A.T. Core Values described below should be protected in its extant state, or otherwise offset by enhancements to improve recreation or conservation value in the vicinity.

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This policy is also intended to provide guidance regarding best practices to preserve and protect the A.T. experience as inevitable change takes place surrounding the Trail. In severe cases relocation of, or reconsideration of a proposed development to remove a serious threat to the Trail corridor

² <u>https://www.nps.gov/subjects/nationaltrailssystem/upload/National-Trails-System-Act-Amended-2019.pdf</u>

³ <u>https://www.nps.gov/appa/learn/management/upload/CompPlan_web.pdf</u>

⁴ <u>https://www.nps.gov/appa/getinvolved/upload/APPA-Foundation-Document-2015.pdf</u>

⁵ <u>https://appalachiantrail.org/our-work/conservation/conservation-and-trail-management-policies/</u>



or the Trail experience may be warranted, and ATC and its partners are prepared to engage decision-makers in this regard. In most cases the utilization of best practices regarding siting, design, scale and remediation are more appropriate responses. The ATC and its partners encourage EARLY AND COMPREHENSIVE COMMUNICATION IN THE PLANNING STAGE WITH ATC AND WITH FEDERAL AND STATE AGENCY LAND STEWARDS regarding any proposed development that may have an adverse impact on the Trail, to ensure the best possible outcomes.

The Conservancy may also use the ATC Land Trust's *Land Protection Policy*⁶ as an objective means of weighing the relative merits of protecting areas or specific properties near the Trail through easements, purchase, community outreach and planning, or other means. The Land Protection Policy can be used to proactively identify high-priority areas that may be threatened by incompatible development, and to work toward the protection of these critical lands.

Core Values to be protected

- 1. <u>Maximum recreation potential</u> The A.T., which exists in proximity to over ³/₃ of the population of the nation, is intended to be welcoming and accessible to people who seek recreation in the rural and natural environment of the Appalachian Mountains, as an escape from the busy urban lifestyle that many visitors experience on a day-to-day basis. Hiking, picnics, climbing, camping, quiet meditationare among the many traditional ways visitors to the A.T. seek recreation. A particularly important tradition on the A.T. is self-sufficient long-distance hiking on the Trail. Some types of recreation such as motorized travel, recreation involving artificial environments, rides or group sports are inappropriate along the Trail, and are often prohibited by law. (See ATC policies for non-hiking recreational use.⁷) This policy seeks to preserve the ability for many types of traditional recreation to continue in the Trail corridor, and recognizes the economic value of outdoor recreation to adjacent communities near the Trail, and the threat posed to both the intent of the National Trails Systems Act and the economic health of the region by activities that have a negative impact on traditional recreation potential in the A.T. corridor.
- 2. <u>Conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural</u> <u>qualities of the areas through which the Trail passes</u> The Trail traverses the setting of a

⁶ Under "Land and Resource Management" in the following list of policies: <u>https://appalachiantrail.org/our-work/conservation/conservation-and-trail-management-policies/</u>

⁷ Under "Non-Hiking Recreational Use" in the following list of policies: <u>https://appalachiantrail.org/our-</u>work/conservation/conservation-and-trail-management-policies/

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great deal of human history in the Eastern US, from indigenous lands and cultures, early European immigrant settlements, sites important in the history of slavery in America, to Revolutionary War and Civil War sites and Industrial Revolution landmarks. It also passes or traverses numerous important natural features - geologic, flora, fauna, hydrologic - that figure prominently in the natural (and human) history of the Appalachians. This policy seeks to protect these significant resources to bring history alive for visitors to the Trail.

- 3. Open areas and vistas from the Trail The original vision for an Appalachian Trail, first proposed by Benton MacKaye in 1921⁸, called for a pathway that traverses the high ridgelines of the Appalachians. Trail builders and managers have maintained this focus through the years and the current footpath is designed to bring visitors to the high points of the Appalachian crest, where balds, areas above treeline, and exposed mountainsides provide extraordinary views of the surrounding landscape. This policy seeks to emphasize the importance of this "above the world" viewpoint from the Trail, and help surrounding communities manage the ever-evolving "view from the Trail" as they make land-use decisions.
- 4. <u>Wilderness areas and experience</u> Multiple areas along the A.T. have been designated by Congress as "wilderness areas", that are managed with the intent of retaining the primeval character of the natural landscape, without permanent improvements or human habitation, with the intent that the general appearance of wilderness areas seems to have been affected primarily by the forces of nature with the imprint of man's work substantially unnoticeable. These wilderness areas provide unique opportunities to the visitor for solitude or a primitive and unconfined type of recreation. The experience of wilderness is not only visual, but auditory and olfactory as well, and this policy seeks to protect the ability of Trail visitors to have this experience of remoteness in these specific designated areas. Wilderness areas represent the highest standard for protection along the A.T.
- 5. <u>Protection of significant natural habitats</u> Part of the experience of traversing the Appalachian highlands is being among the extraordinary complexity of plant and animal species that thrive here. The Appalachians are among the most biologically-diverse landscapes in the world. The land protected for the A.T. is but a very narrow corridor within a much larger ecosystem, and management of the complex systems needed to support habitats for plants, migratory birds and other wildlife requires cooperation among all the

⁸ <u>https://appalachiantrail.org/our-work/an-appalachian-trail-a-project-in-regional-planning/</u>



entities that own or manage land surrounding the Trail. This biodiversity both attracts people to visit the Trail, and supports ecosystems that ensure clean water and healthy air for millions of residents downhill and downstream of the A.T. This policy seeks to set the stage for protection of this resource beyond just Trail lands, and encourage communication and coordinated action to this end.

- 6. <u>Safety for visitors on the Trail</u> Part of what supports the recreation potential of the Appalachian Trail is the notion that it is for everyone that all can feel safe and can gain self-confidence from recreating in the natural lands through which the Trail passes. Access to the Trail is necessary and mandated in Federal legislation, but too much access, or access in the wrong places, can foster a sense of threat and possibly encourage negative activity on or around the Trail. This policy seeks to establish an intent to preserve a Trail where all can feel safe by avoiding possible negative impacts from encroaching development or inappropriate or uncontrolled access.
- 7. <u>Climate change awareness</u> ATC has established a climate change policy (see ATC *Climate Change Policy* under "External Threats"⁹) and in keeping with this commitment supports efforts to document climate impacts, support climate mitigation techniques and explore partnership opportunities to reduce the impact of rapid climate change to the Trail and its surrounding lands.

Process for identifying, coordinating, managing and mitigating impacts to the Trail

- 1. <u>Early intervention and communication.</u> Partners in the A.T. cooperative management network, including ATC staff, Club volunteers, agency staff and citizens of Trail communities should establish early and proactive communication with local jurisdictions who may be involved in approval of off-site developments in the vicinity of the Trail, as well as with State agencies that may be engaged in approval processes for any of the impacts noted in the sections below. In this way opportunities to affect the design and siting of possible developments early in the planning process are greater.
- 2. <u>Communication with developers / builders / landowners.</u> ATC coordinates with potential developers, and encourages landowners and development representatives to engage with the cooperative management network of the A.T. through ATC and the State or

⁹ <u>https://appalachiantrail.org/our-work/conservation/conservation-and-trail-management-policies/</u>



Federal agency responsible for the land affected, to identify possible conflicts with the Trail Core Values noted above, open communication channels and work together to develop ways to mitigate or eliminate any potential negative impact to these values. ATC commits to providing timely feedback and work positively to resolve any issues identified that may affect the Trail experience.

- 3. <u>Utilize best practices in design and siting.</u> Listed below are suggestions for best practices that can often mitigate possible impacts to the Trail experience. These are only examples of broader industry-wide best management techniques. Along with other industry best practices, these techniques should be employed early in the planning process to ensure compatible adjacent development. ATC will encourage agency partners and local and regional planning jurisdictions to incorporate those criteria into agency, local, and regional plans and regulations, and require notification of and consultation with affected stakeholders, and work with local A. T. Clubs to do likewise.
- 4. <u>Cooperative management community seeks to speak with one voice.</u> After identification of a development proposal that may have an concerning impact on the Trail experience or resources, ATC staff will engage with the ANST administrator and the appropriate agency land stewards who have jurisdiction over the affected A.T. lands, and with Trail community representatives and A. T. Club representatives in the vicinity of the proposal, with the intent to coordinate communication within the cooperative management network, and also coordinate communication directly with development representatives. However, specific agencies or entities that are part of the cooperative management system may have unique concerns or positions, and reserve the right to individually state their positions regarding these issues. A. T. Clubs often interact regularly with local and state agencies on a variety of legislation and rule-making issues of particular concern to the Club. Nothing herein precludes this best practice on the local level.
- 5. <u>Enforcement activities reserved for the agencies and landowners.</u> Any enforcement activity that is made necessary by violation of any laws or encroachment on any real property that is part of the A.T. corridor is reserved for the State or Federal agency responsible for the land affected. If such impact is on ATC-owned lands or easements, ATC will coordinate with local/state law enforcement for available remedies.
- 6. <u>Mitigation strategies to be coordinated among the cooperative management partners.</u> Mitigation strategies to be negotiated with developers should be coordinated between all



partners in the cooperative management system that are affected, including nearby Trail communities and A. T. Clubs, but legal agreements documenting such strategies are reserved for the specific landowners and land management agencies with jurisdiction or expertise, or the ATC, that are direct parties to an agreement.

7. <u>Representation of the cooperative management network at official hearings / legal</u> <u>proceedings.</u> ATC will represent the specific interests of the ATC as an organization, and the general interests of the cooperative management volunteer community (after coordinating with all affected stakeholders) at any official proceeding or in official correspondence directed at jurisdictional entities regarding impacts to the Trail. The President of ATC shall be the person who represents the official position of the ATC. However, ATC will not represent the official position or communicate any official response representing any State or Federal agency that is affected by such a proposal. All official correspondence or representation at hearings by any Federal or State agency is reserved as the sole responsibility of the agency leadership. Other partners or stakeholders, including A. T. Clubs or A. T. Communities, may choose to represent themselves independently at official proceedings or in official correspondence regarding issues of specific relevance to their concerns.

Development types covered by this policy

Land development activities, including ski lifts, trails, shooting ranges and other active recreation facilities, all buildings, observation towers, golf courses, industrial facilities, subdivisions, etc., visible from or within the soundscape of the ANST;

Surface and underground mining activities, such as mineral or gravel extraction operations, pit or mining operations, etc., proposed to cross the Trail or that are visible from or within the soundscape of the ANST;

Transportation and trail facilities, including private and public roads, ATV and bicycle trails, auto racing or proving grounds, airports and air traffic control infrastructure, proposed to cross the Trail or that are visible from or within the soundscape of the ANST;

Energy generation or distribution infrastructure, including power lines, pipelines, and related utility buildings, utility-scale wind-energy facilities, utility-scale solar installations (not including rooftop solar on residential structures), proposed to cross the Trail or that are



visible from or within the soundscape of the ANST, as well as and roads and utilities serving these facilities;

Communication infrastructure, including internet, phone, and satellite infrastructure, phone and communication lines, aircraft beacons, and associated towers and their lighting, proposed to cross the Trail or that are visible from or within the soundscape of the ANST;

Other facilities not listed that may have an impact on the Trail itself or the Trail experience or resources as described in the Core Values noted above.

Policy provisions that apply to all types of impacts

- ATC encourages local governments, State and Federal regulatory agencies to <u>require</u> <u>notification of and consultation with the organizations and agencies responsible for</u> <u>management of the Appalachian Trail</u> prior to approvals or issuance of any permits for new facilities or significant changes in existing facilities in the vicinity of the A.T., or in its viewshed and soundscapes.
- Any new impacts associated with proposed development projects should <u>coincide with</u> <u>existing major impacts to the Trail experience</u>. For example, new utility transmission facilities should be co-located with existing utility lines and/or road crossings wherever possible;
- <u>No new linear facilities</u> (pipelines, transmission lines, roads, other utility corridors, etc.) should physically cross the Appalachian Trail or be located within the Appalachian Trail corridor or management area <u>unless a reserved right for such a crossing already exists oris</u> <u>mandated</u> by Federal Government law and is properly permitted;
- 4. <u>Visual impact of developments should be measured in this way</u>: ATC seeks to preserve, to the maximum extent possible, the existing natural visual character of and from the ANST. There are a number of technical systems for evaluating and comparing the value of scenic views, including systems in use by the US Forest Service and National Park Service. Each potential impact should be evaluated in context using the best methodology available, with the objective that post-development, visual impacts in the viewshed as viewed from the Appalachian Trail are minimized, and conform as close as possible to the existing landscape surrounding the Trail. As urban development moves closer to the Trail corridor, specific



mitigating efforts should be taken to preserve a rural or natural buffer of significant size adjacent to the A.T. corridor. Inventories of critical visual resources using the NPS Visual Resource Inventory (VRI) methodology have been completed for sections of the A.T. and this effort continues with intent to cover the entire Trail. This information is available directly from ATC¹⁰;

- For noise impacts, ATC seeks to preserve, to the maximum extent possible, the existing natural soundscape of the ANST. ATC will use NPS Management Policies 2001, 4.9, Soundscape Management¹¹, as guidance when evaluating potential noise impacts;
- 6. For other impacts, such as smells, vibration, etc., ATC seeks to <u>preserve</u>, to the maximum <u>extent possible</u>, the existing natural ambient status of the ANST;
- 7. At a minimum, any proposed development should <u>avoid impacts to the following elements</u><u>of the Appalachian Trail experience</u>: (a) wilderness or wilderness study areas; (b) National Park Service natural areas; (c) Forest Service scenic areas, semi-primitive non-motorized areas, or designated backcountry areas; (d) natural heritage sites; (e) cultural resource sites; (f) Trail-related facilities, such as shelters and campsites; and (g) areas of significant ecological or biological value, such as alpine zones, balds, wetlands, water supply watersheds and riparian zones.
- 8. <u>New developments of all types should be evaluated on a no-net-loss basis</u>, i.e., the Trail experience as defined by the A.T. Core Values described above should be protected in its extant state, or otherwise offset by enhancements to improve recreation or conservation value in the vicinity.

Best practices that apply to specific impacts

A. Land Development:

 <u>Avoid construction on mountaintops, ridgelines, and other visible areas in the foreground</u> <u>and middle-ground distance zones</u> as seen from the Appalachian Trail, unless the visual, noise and other experiential impacts to the Appalachian Trail can be satisfactorilymitigated;

¹⁰ <u>https://appalachiantrail.org/</u>

¹¹ <u>https://www.nps.gov/subjects/sound/soundscape-management-policy_4-9.htm</u>



- 2. Large-scale developments within view of the A.T. should be designed to <u>protect existing tree</u> <u>stands to the extent possible within the design of the project</u>, rather than clearing the entire site during construction;
- 3. <u>Active recreation uses that generate noise should be designed in such a way that landforms</u> <u>or other auditory buffers exist between the Trail and the facility</u>, and / or maintain a significant undisturbed buffer from A.T. corridor lands, and noise-generating activities should be limited by operating hours to avoid early morning or evening sound that can be heard from the A.T.

B. Surface and Underground Mining Activities:

- <u>Avoid mining or quarry operations on mountainsides facing the A.T., or in areas near the</u> <u>Trail</u>. Mining is a high-impact land use with serious concerns regarding noise, dust and visual and ecological impact and is most appropriate at large distances from the Trail;
- 2. New surface mining or quarry operations near the A.T. are inappropriate, but if an existing surface mine or quarry is active near the A.T., work the surface mine or quarry toward the ridgeline location of the A.T., rather than away from it, to maintain a natural landscape view from the Trail as material is removed downhill;
- For existing active facilities near the A.T., incorporate robust measures to <u>reduce or</u> <u>eliminate fugitive dust from the mining or quarry operation, and limit operations to avoid</u> <u>noise impacts</u> in early morning and evening;
- Screen all buildings behind tree stands or other vegetative barriers, and <u>design all haul</u> roads and access facilities in accordance with best practices for Transportation and Trailrelated Construction noted below;
- 5. <u>Provide funding and a strategy up front for decommissioning and restoration</u> of the site;

C. Transportation and Trail-related Construction:

- 1. Vehicle access roads and driveways to private land adjacent to the Appalachian Trail corridor should <u>maintain a significant buffer of undisturbed land</u> between the proposed road and the A.T. lands boundary;
- 2. <u>No new access points to the A.T. or to A.T. corridor lands</u> should be incorporated into any design for new roads or hiking trails, unless specifically planned and approved by ATC and



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the agency land manager. See *Side and Connecting Trail Policy*, and *Trailheads and Parking Policy*, under "General Trail Management"¹²;

- 3. Vehicle roadways, utility and mining access roads and logging access roads, etc. within sight of the Trail (except for existing public road and highway crossings) <u>should be designed to the</u> <u>minimum possible width and standard necessary and be sufficiently distanced from the Trail</u> <u>corridor to minimize visual impact from the Trail</u>. All service roads should be gated to prevent unauthorized use;
- 4. <u>Any new trail or roadway facility that will generate noise should be located a significant enough distance away from the A.T. so that the sound generated is not heard by users of the Trail.</u> This includes test tracks, raceways, ATV paths, off-road motorcycle trails, etc. These facilities should be designed in such a way that landforms or other auditory buffers exist between the Trail and the facility;
- 5. Any <u>new rail or public transportation facilities should be designed to coincide with existing</u> <u>transportation infrastructure</u> (road and highway crossings) to traverse the A.T. corridor;
- 6. Any new aviation facility, airport, etc. should be designed in such a way that <u>flight paths are</u> <u>routed away from the A.T. corridor</u> to avoid low altitude overflights and noise impacts to the Trail experience.

D. Energy Generation and Distribution Infrastructure:

- 1. Utility -Scale Solar Energy Facilities
 - a. <u>A glare study¹³ is recommended</u> for utility-scale solar energy facilities in the viewshed of the A.T. in the design phase to identify any possible mitigation that might be necessary;
 - b. To the extent possible, <u>use non-reflective materials</u>;
 - c. <u>Site new facilities first on previously disturbed sites</u> (mined areas or industrial sites) or on existing buildings with large rooftops, before utilizing agricultural, conservation or forest land;
 - d. <u>Consider co-location with livestock grazing</u> if located in rural areas and utilize pollinator-friendly perennial and shrub plantings around solar arrays instead of gravel;

¹² <u>https://appalachiantrail.org/our-work/conservation/conservation-and-trail-management-policies/</u>

¹³ <u>https://ip.sandia.gov/opportunity/solar-glare-hazard-analysis-tool-sghat/</u>



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- e. <u>Floating solar facilities on bodies of water visible from the Trail are not</u> <u>recommended</u> when visible from the A.T. corridor;
- f. <u>Provide funding and a strategy up front for decommissioning and restoration</u> of the site.

2. <u>Wind Energy Facilities</u>

- Site wind energy facilities on private or public land that is a significant distance <u>away</u> from the Appalachian Trail corridor. The visual impact of a tower is highest within a radius of up to ten times of the height;
- b. Turbine structures more than 200 feet tall are required to have FAA hazard beacons to protect against aviation collisions. Standard FAA hazard lighting has a significant impact on visual integrity of a landscape, even at great distances. Lighting also affects bird migration, and may result in bird or bat kills. <u>To the extent feasible, turbines near or adjacent to the A. T. corridor should be less than 200 feet tall;</u>
- c. The impact of a turbine in excess of 200 feet is a concern when visible from the A.T. corridor, and is affected by a number of factors, as follows¹⁴:
 - i. <u>New structures in excess of 200 feet should be sited further away from the</u> <u>A.T. corridor</u>. The visual impact of a tower is highest within a radius of up to ten times of the height.
 - ii. <u>Regular arrays</u> of taller towers have less visual impact than random arrays.
 - iii. <u>Fewer, taller towers</u> have less impact than multiple towers.
 - iv. <u>Synchronized moving</u> of turbines reduces negative visual impact.
 - v. Shadow flicker upon A.T. lands should be avoided in all circumstances.
 - vi. I<u>f feasible and permitted by FAA, utilize an Aircraft Detection Lighting System</u> (ADLS) in the viewshed of the A.T., which maintains a communication tower of any height to be unlit until the ADLS radars detect nearby aircraft, at which time the tower lighting system is triggered to illuminate until the aircraft is out of radar range¹⁵;
- d. <u>Structures should be located near existing disturbed areas associated with energy</u> <u>infrastructure</u>, such as transmission line corridors or pipeline corridors, or in existing developed areas or along roads, with the intent to minimize impacts on otherwise undeveloped sites;

¹⁴ from Alphan. <u>Modelling potential visibility of wind turbines: A geospatial approach for planning and impact mitigation</u> in Renewable and Sustainable Energy Reviews, Dec. 2021

¹⁵ <u>https://www.nacleanenergy.com/wind/adls-101-choosing-an-aircraft-detection-lighting-system-for-your-wind-farm-1</u>



- e. <u>Use the Visual Resource inventory data available from ATC¹⁶ or other available tools</u> <u>to determine whether the proposed facility will be visible from one or more</u> <u>locations along the Trail</u>. View points of critical Trail-wide importance are the highest priority for protection. A better project may be visible from one or two vantage points rather than multiple places along a significant length of Trail;
- f. <u>Use non-reflective, background conforming color scheme</u> (such as a self-rusting metal on towers visible above treeline) on body of the tower and associated fixtures and equipment shelters.
- g. Noise is a consideration with wind turbines in operation, and <u>a sound study is</u> <u>recommended</u> to minimize turbine noise as perceived from the A.T. innormal operations;
- h. <u>Wind energy facilities should be located on private property</u> whenever possible and should not be sited on or in water bodies visible from the Trail. Public recreation and conservation lands should only be the site of wind energy facilities when no other option exists.
- 3. Linear Utility Infrastructure, including pipelines and electrical transmission lines
 - a. Linear facilities that require clearance of rights-of-way, usually in a straight line, have a dramatic impact on a scenic experience. Although a necessary aspect of our essential energy infrastructure, the severity of impact on the visual character of the landscape demands particular care in siting and maintenance of such facilities. <u>ATC recommends a diligent evaluation of alternatives before siting a new facility</u>, including increasing capacity in existing lines, or modifying routes to reduce the effect of the new facility;
 - Linear utility authorizations¹⁷ should be evaluated on a no-net-loss basis, i.e., any degradation of A.T. Core Values as described above should be offset by enhancements to improve recreation or conservation value in the vicinity;
 - c. Keep clearance for linear utility facilities to the minimum necessary width;
 - d. <u>Use maintenance techniques that reduce the contrast between the cleared land in</u> <u>utility rights-of-way and the natural landscape</u>, including hand-clearance of vegetation, "feathering" of vegetation along the edges of the right-of-way, retaining

¹⁶ <u>https://appalachiantrail.org/</u>

¹⁷ Linear utility authorizing agencies include the Federal Energy Regulatory Commission (FERC) for interstate natural gas pipelines and electrical transmission lines, other federal agencies for liquids pipelines, and state agencies for intrastate liquids and natural gas pipelines. The terms used for authorization documents vary with agency.



low-growing vegetation, reforestation with native plant materials where possible, management of invasive plants, and avoidance of the use of herbicides;

- e. <u>The proposed pipeline or transmission line should cross the A.T. once, at a point</u> <u>already subject to significant impact</u>, such as an existing pipeline, road crossing, or power-line crossing, and vegetative screening from the Trail should be installed;
- f. <u>Construction techniques that minimize disturbance to A.T. landscapes should be</u> <u>utilized</u>, e.g. horizontal directional drilling (HDD), etc.;
- g. <u>Use best practices noted above in Transportation and Trail-related Construction</u> <u>when designing access roads</u> to the utility corridor;
- h. <u>Minimize or eliminate noise</u> as heard from the A.T. from compressors or pumping stations;
- Use the Visual Resource inventory data available from ATC¹⁸ or other available tools. to determine whether the proposed facility will be visible from one or more locations along the Trail. View points of critical Trail-wide importance are the highest priority for protection. A better project may be visible from one or two vantage points rather than multiple places along a significant length of Trail;
- a. <u>Use non-reflective, background conforming color scheme</u> (such as a self-rusting metal on towers visible above treeline) on body of the tower and associated fixtures and equipment shelters.
- j. <u>Provide funding and a strategy up front for decommissioning and restoration</u> of the utility corridor if abandoned in the future;
- k. In addition to meeting required land owner notification and permitting requirements, utility companies and public oversight agencies should provide <u>notice</u> to ATC and nearby Clubs at least 30 days in advance of maintenance operations in <u>the vicinity of the Trail</u>. Signs should be placed on the exterior boundary of Appalachian Trail corridor lands indicating that the local Trail Club and ATC should be contacted for further information prior to clearing the utility right-of-way behind the signs;
- Linear utility authorizations¹⁹ should clearly state the linear utility owner and operator's affirmative duty to protect the environment and ensure the health and safety of A.T. users and the communities in the vicinity of the Trail. These duties include, but are not limited to:

¹⁸ <u>https://appalachiantrail.org/</u>

¹⁹ Linear utility authorizing agencies include the Federal Energy Regulatory Commission (FERC) for interstate natural gas pipelines and electrical transmission lines, other federal agencies for liquids pipelines, and state agencies for intrastate liquids and natural gas pipelines. The terms used for authorization documents vary with agency.



Impacts of Development and Energy Infrastructure in the Vicinity of the A.T.

- i. protecting against fire, explosion, or release of toxic substances;
- ii. reducing or eliminating release of greenhouse gases such as methane;
- iii. avoiding damage to, or contamination of, the environment, including soil, vegetation, animal life, surface water, and groundwater;
- iv. protecting cultural and historic artifacts; and
- v. retaining liability for any negative impacts or damages resulting from the facility.

E. Communication Infrastructure:

- 1. Telecommunication towers / microwave towers, etc.
 - a. <u>Place new towers within existing "antenna farms"</u> (i.e., clusters of towers) when possible;
 - b. <u>Select already degraded areas for tower placement</u> rather than siting in existing undisturbed natural areas;
 - c. <u>Several shorter, un-guyed towers may be preferable</u> to a single guyed and lit taller tower;
 - d. <u>New towers should be not more than 199 ft.</u> above ground level (AGL), and unlit if that can safely conform to FAA regulations;
 - e. <u>Use non-reflective, background conforming color scheme</u> (such as a self-rusting metal on towers visible above treeline) on body of the tower and associated fixtures and equipment shelters.
 - f. <u>Minimize tree clearing around the site and access road</u>.
 - g. <u>Use night sky-friendly lighting at the compound</u>: Light only where and when needed, using motion sensor lighting, shield lights and direct all lightdownward, select lamps with warmer colors, use smaller wattage bulbs
 - h. <u>For towers with lighting requirements, if feasible and permitted by FAA, utilize an</u> <u>Aircraft Detection Lighting System (ADLS)</u> in the viewshed of the A.T., which maintains a communication tower of any height to be unlit until the ADLS radars detect nearby aircraft, at which time the tower lighting system is triggered to illuminate until the aircraft is out of radar range;
 - i. <u>Provide funding and a strategy up front for decommissioning and restoration</u> of the telecommunication tower if abandoned in the future.



j. Communication infrastructure is constantly evolving, with new technologies emerging rapidly. The Federal Communication Commission (FCC)²⁰ regulates this activity. <u>ATC recommends that new communication infrastructure authorizations</u> <u>near the A.T. require environmental assessments</u> as per FCC regulations similar to such areas as wetlands, cultural or historic sites, or where the infrastructure might affect endangered species habitats.

THIS POLICY SUPERSEDES THE FOLLOWING EXISTING ATC POLICIES:

PIPELINE CROSSING POLICY (2015) WIND ENERGY FACILITIES POLICY (2007) ROADS AND UTILITIES POLICY (2000) IMPACTS OF DEVELOPMENT POLICY (2002)

For questions related to this document please contact the Appalachian Trail Conservancy at <u>www.appalachiantrail.org</u>, or P.O. Box 807, Harpers Ferry, WV, 25425-807.

The Appalachian Trail Conservancy's mission is to protect, manage, and advocate for the Appalachian National Scenic Trail.

²⁰ https://www.fcc.gov/wireless/bureau-divisions/competition-infrastructure-policy-division/tower-and-antennasiting